

Serial No.: 10/081,361

---

**AMENDMENTS TO THE CLAIMS**

1. (Currently amended) A fully depleted semiconductor-on-insulator (SOI) field effect transistor (FET), comprising:

a layer of semiconductor material disposed over an insulating layer, the insulating layer disposed over a semiconductor substrate;

a source and a drain formed from the layer of semiconductor material;

a body formed from the layer of semiconductor material and disposed between the source and the drain, wherein:

the layer of semiconductor material is etched such that a thickness of the body is less than a thickness of the source and the drain and such that a recess is formed in the layer of semiconductor material over the body, the body having a thickness of less than about 50 Å; and

~~the source and the drain form junctions with the body such that no extensions are disposed between either of the source and body or the drain and the body; and~~

a gate formed at least in part in the recess and the gate defining a channel in the body, the gate including a gate electrode spaced apart from the body by a gate dielectric made from a high-K material.

2. (Canceled)

<sup>2</sup> ~~3~~ (Original) The FET according to claim 1, wherein a spacer is formed adjacent each sidewall of the gate electrode.

<sup>3</sup> ~~4~~ (Original) The FET according to claim <sup>2</sup> ~~3~~, wherein each spacer is formed at least in part in the recess.

Serial No.: 10/081,361

---

~~4/5~~ (Original) The FET according to claim <sup>2</sup>~~3~~, wherein each spacer is formed from an undoped polycrystalline silicon.

~~5/6~~ (Original) The FET according to claim <sup>2</sup>~~3~~, wherein the spacers are respectively separated from the source and the drain by an oxide layer.

~~6/7~~ (Original) The FET according to claim <sup>2</sup>~~3~~, wherein the spacers are separated from the gate electrode by the gate dielectric.

~~7/8~~ (Original) The FET according to claim 1, wherein the gate electrode is formed from a metal containing material.

~~8/9~~ (Original) The FET according to claim <sup>1</sup>~~8~~, wherein the gate electrode is composed of one or more materials selected from aluminum, ruthenium, ruthenium oxide and mixtures thereof.

~~9/10~~ (Original) The FET according to claim 1, wherein a source contact is disposed over the source, a drain contact is disposed over the drain and a TEOS oxide layer is formed over the source contact and the drain contact.

~~10/11~~ (Original) The FET according to claim 1, wherein the high-K material of the gate dielectric has a relative permittivity of greater than about 20.

Serial No.: 10/081,361

---

~~11/12.~~ (Original) The FET according to claim 1, wherein the high-K material of the gate dielectric is composed of one or more materials selected from hafnium oxide; zirconium oxide, cerium oxide, aluminum oxide, titanium oxide, yttrium oxide, barium strontium titanate and mixtures thereof.

13-24. (Canceled)